

RESPONSE UNDER 37 C.F.R. § 1.111
U.S. APP. NO. 09/901,154

REMARKS

Claims 1-23 are pending in the application. Claims 1, 2, 9-12, 15, 18-20, 22 and 23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by McHale et al (U.S. Patent 6,385,203). Claims 3, 5-8, 13 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over McHale et al. Claims 4, 14, 16 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over McHale et al in view of Bhatia et al (U.S. Patent 6,023,724).

The present invention relates generally to a modem and a method of controlling a modem. One embodiment of the invention is shown in Fig. 2 and includes a modem 40 for facilitating communication between switching system 22 and subscriber terminal 12. The modem 40 has a detection unit 80 which detects a connection status of the subscriber terminal 12, and outputs a non-connection signal when it is determined that the subscriber terminal 12 is not connected to the modem. The non-connection signal can be applied directly to second interface 70 to stop the operation of the second interface 70, thereby causing second interface 70 to stop maintaining the communication channel to the switching system 22. In a variation of the embodiment shown in Fig. 2, detection unit 80 applies the non-connection signal to the controller 60 which then controls the second interface 70 to stop operation.

In another embodiment shown in Fig. 4, detection unit 80 causes switch 85 to be controlled to turn off power to second interface 70, when the non-connection signal is output.

In another embodiment shown in Fig. 5, operation of the second interface 70 is stopped when synchronization signal-detecting unit 53 fails to detect a synchronization signal.

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In rejecting claim 1, the Examiner argues that McHale et al disclose each of the claimed features. Applicants respectfully traverse the rejections, and in particular as they relate to the claimed controller.

In more detail, the claimed controller controls the second interface to terminate operations of the second interface if a non-connection signal is inputted from the detector. In rejecting claim 1, the Examiner states that the controller block 80 of Figs. 10A and 10C control the second interface to terminate operations of the second interface if a non-connection signal is inputted from the detector. The Examiner cites steps 408 and 412-416 of Fig. 9, col. 2, lines 46-58 and col. 20, lines 6-11 as disclosing the claimed operation of the controller. In his analysis of the claimed second interface, the Examiner cites the network interface/multiplexor block 622 of Fig. 12 as disclosing the claimed second interface.

Applicants respectfully note that there is nothing in the Examiner's analysis of the controller to indicate that the network interface/multiplexor block 622 of McHale et al has its operations terminated if a non-connection signal is inputted from the detector, and further, Applicants note that the network interface/multiplexor block 622 of McHale et al does not have its operations terminated upon detection of a non-connection state.

McHale et al discloses a communication server having a plurality of modems (e.g., modems 160 in model pool 74 of Fig. 4 that facilitate communication between a plurality of data lines 54 and a network). In col. 2, lines 46-58, which is cited by the Examiner as disclosing terminating operations of the second interface if a non-connection signal is inputted, it is stated that an activity detector disconnects a subscriber after a predetermined period of inactivity to

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release a modem for use by another subscriber. Thus, if a particular modem is released for use by another subscriber, the network interface/multiplexor block 622 would be used by that other subscriber and the operation of the network interface/multiplexor block 622 would not terminate. Accordingly, Applicants respectfully submit that there is no teaching in McHale et al, either in the portions cited by the Examiner or elsewhere in the patent, that the network interface/multiplexor block 622 terminates operations if a particular subscriber is not communicating via a modem.

Regarding claim 10, this claim depends from claim 1 and recites a switching device mounted on a path between the second interface and a power supply, wherein the controller controls the switching device to be transited to the off position if the non-connection signal is inputted. In rejecting claim 10, the Examiner refers to network interface 714 of Fig. 14 and block 712 and states that there would inherently be a switching device coupled to the network interface. The Examiner does not explain, however, how the switching device is transited to the off position if a non-connection signal is inputted. Applicants also submit that this feature is not disclosed or suggested by McHale et al.

Independent claim 11 includes a switching device transiting on and off a supply of electric power to the second interface from a power supply according to an input of the connection signal or the non-connection signal. In discussing this feature of claim 11, the Examiner provides analysis similar to that provided for claim 10. As stated in the preceding paragraph, Applicants find no teaching in McHale et al for turning on and off electric power to the second interface according to an input of the connection signal or the non-connection signal.

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The Examiner's analysis for claim 18 is substantially similar to his analysis for claim 1, and as such, Applicants respectfully submit that claim 18 is allowable for similar reasons.

In rejecting method claims 19, 20 and 23, the Examiner refers to his analysis of claims 1, 2 and 9, respectively. Applicants submit that claims 19, 20, and 23 are allowable at least for similar reasons as discussed above.

Claim 22 depends from claim 19 and recites that the terminating step terminates a supply of electric power to the second interface. In his rejection, the Examiner refers to steps 408 and 412-416 of Fig. 9 and col. 2, lines 46-58 and col. 20, lines 6-11 of McHale as teaching this feature. For reasons discussed above, Applicants submit that McHale et al. does not teach terminating electric power to the second interface.

Regarding the rejection of claims 3, 5-8, 13 and 21 under 35 U.S.C. § 103 as being unpatentable over McHale et al, Applicants respectfully submit that these claims are not rendered obvious by McHale et al at least because of the failure of McHale et al to teach or suggest the features of the independent claims as discussed above.

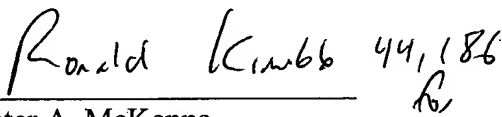
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Regarding the rejection of claims 4, 14, 16 and 17 under 35 U.S.C. § 103 as being unpatentable over McHale et al in view of Bhatia et al, Applicants submit that Bhatia et al does not make up for the deficiencies of McHale et al that are discussed above.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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